REMARKS

The foregoing amendments and the following remarks are submitted in response to the communication dated November 26, 2004.

Status of the Claims and Claim Objections

Claims 4, 5 and 14-17 are pending in the application. Claims 4 and 16 have been amended and new claim 49 is now presented in order to more particularly point out and distinctly claim that which Applicants regard as the invention. Support for the amended claims and newly presented claim can be found generally through Applicants' Specification.

Priority

The Examiner states that the granting of priority for the DNA sequence of SEQ ID NO:34 to the instant Application filed April 10, 2001 is proper as he asserts that there is no support for this sequence in related Application Serial No. 09/623,131, filed August 3, 2000. Applicants respectfully disagree. The '131 Application provides and discloses mouse and human heart alpha kinase, including the full length mouse amino acid and encoding nucleic acid sequence and provides 335 C-terminal amino acids and their encoding nucleic acids of human heart alpha kinase, including particularly the heart kinase catalytic domain sequence. This '131 Application sequence provides and corresponds to a sequence which is a fragment of SEQ ID NO:34 which encodes an alpha kinase polypeptide having alpha kinase activity. Applicants request that the Examiner grant priority to August 3, 2000 and the '131 Application, at least to Claim 16, subpart c.

Claim Objections

Claim 5 is objected to because it is dependent on rejected claim 4. The Examiner requires appropriate correction. Applicants respectfully disagree and submit that claim 5 does not recite or refer to claim 4 and is, in fact, an independent claim. Applicants request that the Examiner accept claim 5 as an independent claim, not dependent on any rejected claims.

The Specification Fully Enables the Claimed Invention

The Examiner has again rejected Claims 4 and 14-17 under 35 U.S.C. 112, first paragraph, written description, as containing subject matter which was not described in the Specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the Application was filed, had possession of the claimed invention. Applicants respectfully disagree and assert that the Specification, which discloses human and mouse heart alpha kinase, and provides a comparison of these polypeptide sequences with other such alpha kinases, teaching amino acid residues for substitution based on sequence comparison of these alpha kinases, meets the written description requirement, including as to naturally occurring allelic variants. The prediction or identification of a sequence as "naturally occurring" versus "manufactured", noted by the Examiner as particularly important for adequate description, would seem to Applicants to be irrelevant, provided that the Specification meets the written description requirement and provides a precise definition. Applicants, however, have above amended claims 4 and 16, without prejudice to continued prosecution, and assert that Applicant's amendment overcomes this rejection and that the claims as now presented meet the written description requirement.

The Examiner has maintained his rejection of Claims 4 and 14-17 under 35 U.S.C. 112, first paragraph, because the Examiner asserts that the Specification, while being enabling for a host cell transformed with a DNA molecule comprising SEQ ID NO: 34, does not reasonably provide enablement for any host cell transformed with any DNA sequences which hybridizes under standard conditions to the DNA sequence of SEQ ID NO: 34. The Examiner again asserts that one of skill in the art would be unable to predict the structure of the other members of the genus in order to make such members. The Examiner states that no description in the Specification or the art provides particular residues where encoding is important within the disclosed sequence so that its alpha kinase and heart expression is maintained. Applicants respectfully disagree and submit that the Specification clearly enables the skilled artisan to make and/or use the host cells as claimed, including those transformed with DNA sequences which hybridize under standard conditions to the DNA sequence of SEQ ID NO: 34. Applicants point

out that the Specification provides amino acid sequence alignments of the heart alpha kinase with other alpha kinases, with identical and conserved amino acids designated (Figure 4) as well as an alignment of their catalytic domains (Figure 12), pointing to those particular residues which are important within the disclosed sequences. In addition, the claims set out a functional characteristic readily testable and determinable by the skilled artisan using known methods, including as described and provided in the Specification. Applicants, however, have above amended claims 4 and 16, without prejudice to continued prosecution, deleting reference to hybridizing sequences and assert that Applicant's amendment overcomes this rejection.

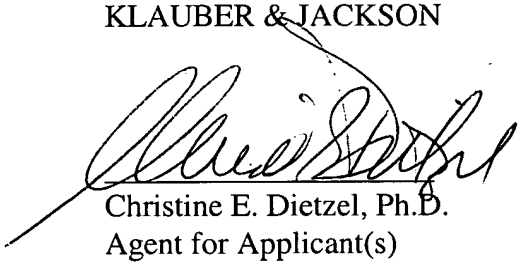
In view of the foregoing amendments and remarks, Applicants submit that the Examiner's rejections under 35 U.S.C. 112, first paragraph, may properly be withdrawn.

CONCLUSION

Applicants respectfully request entry of the foregoing amendments and remarks in the file history of the instant Application. The Claims as amended are believed to be in condition for allowance, and reconsideration and withdrawal of all of the outstanding rejections is therefore believed in order. Should the Examiner feel that further issues remain upon a review of this response, he is invited to call the undersigned at the number listed below to effect their resolution. Early and favorable action on the claims is earnestly solicited.

Respectfully submitted,

KLAUBER & JACKSON



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